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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/612,009	07/07/2000	Gordon Ray Nelson	254/139 P00-0016	7645

22249 7590 08/15/2002

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EXAMINER

BRAHAN, THOMAS J

ART UNIT	PAPER NUMBER
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3652

DATE MAILED: 08/15/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
09/612,009

Applicant(s)  
NELSON et al

Examiner  
Thomas J. Brahan

Art Unit  
3652



— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE Three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Feb 11, 2002
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 15-22 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 15-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on Jan 4, 2002 is/are a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 4, 7 6) ☐ Other:

1. The following is a quotation of the second paragraph of 35 U.S.C. § 112:  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which applicant regards as his invention.
2. Claim 7 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term "the rollers" lacks antecedent basis within the claims, as claim 4 introduces the roller into the claimed combination of elements, but claim 7 depends from claims 6 which depends from claim 1. Claim 7 has not been further treated on the merits.
3. Claim 22 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term "the transfer station" in line 5, lacks antecedent basis as it is not introduced into the claim prior to the occurrence of the term.
4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:  
A person shall be entitled to a patent unless --  
(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.  
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
5. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:  
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.  
  
Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the

subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. § 103, the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 C.F.R. § 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of potential 35 U.S.C. § 102(f) or (g) prior art under 35 U.S.C. § 103.

6. Claims 1-3 and 9 are rejected under 35 U.S.C. § 102(b) as being anticipated by Iwai et al (cited by applicant). Figure 11 of Iwai et al shows a system for processing flat media having an indexer (118; the term indexer is broad as to read on a transfer means which indexes the pods) at a first elevation, a docking station (117) at a second elevation higher than the first elevation, a transfer station with a transfer robot (162), and a process station (108) with a process robot (131). The process system has a loader with an elevator (115) and a conveyor (47) for moving the pods onto the indexer, as recited in claims 2 and 3. The docking station has a door remover (163), as recited in claim 9.

7. Claims 1 and 9 are rejected under 35 U.S.C. § 102(a) as being anticipated by Williams et al. Figures 7 and 8 of Iwai et al show a system for processing flat media having an indexer with its lower shelf at an elevation below the docking station (120).

8. Claims 1, 8, and 15-17 are rejected under 35 U.S.C. § 102(b) as being anticipated by Ohashi. Ohashi shows a system for processing flat media having an indexer (the row of depositories 51) at a first elevation, a docking station (at the location of that robot 22 hands the carrier 8 to the process robot 23) at a second elevation higher than the first elevation, a transfer station (31) adjacent the docking station, a process station (21), and a process robot (23) moveable between the transfer station (117) and the process station (108), for moving flat media between them. Robot (22) has a docking station elevator (224c) for moving a pod (8) vertically from the first elevation to the second elevation, as recited in claim 8. Robot (32) is a transfer robot at the transfer station, as recited in claim 15. Processing cassettes (8) are carriers with spaced apart finger slots engaged by the process robot (23) as recited in claims 16 and 17.

9. Claims 1, 6, 8, 15, and 16 are rejected under 35 U.S.C. § 102(b) as being anticipated by Iwama. Iwama shows a system for processing flat media having an indexer (112a-112n) at a first elevation, a docking station (the location above indexer in which robot 120 operates) at a second elevation higher than the first elevation, a transfer station (130) adjacent the docking station, a process station (200), and a process robot (140) moveable between the transfer station and the process station for moving flat media between them. The indexer includes a shuttle device (115) for moving the pods between parallel rows, as recited in claim 6. The docking station includes an elevator (120) as recited in claim 8. The moving post (134) is a robot with a carrier (136) in the transfer station, as recited in claims 15 and 16.

10. Claims 18-21 are rejected under 35 U.S.C. § 102(b) as being anticipated by Davis et al (cited by applicant). Davis et al shows a system for processing flat media having an indexer (rotating brackets 728), a transfer station above the indexer (note the wafers are raised from the indexer), a docking station (703), a process station (19), a process robot (5) moveable between the transfer station and the process station (19), for moving flat media between them, and at least one docking station elevator (800) for moving a pod vertically from the indexer to the docking station. The docking station elevator has a sliding engager plate (832), as recited in claims 19 and 20. A deck (central square 726) separates the indexer from the transfer station, as recited in claim 21.

11. Claims 1, 8, 15, and 18 are rejected under 35 U.S.C. § 102(b) as being anticipated by Fisher. Fisher shows a system for processing flat media having an indexer (70) at a first elevation, a docking station (the working area of docking means 150) at a second elevation higher than the first elevation a transfer station (the working area of transfer means 190) adjacent to the docking station a process station (12), and a process robot (190) moveable between the transfer station and the process station (19), for moving flat media between them. A docking station elevator (117) moves the pods from the first elevation to the second elevation, as recited in claim 8.

12. Claims 1, 6, 15, and 16 are rejected under 35 U.S.C. § 102(b) as being anticipated by Sakashita. Sakashita shows a system for processing flat media having, an indexer (201) at a first elevation, a docking station (the working area of transferring mechanism 260) at a second elevation higher than the first elevation, a transfer station (at the junction of the process robot 290 and the transfer device 260) adjacent

to the docking station, a process station (100), and a process robot (290) moveable between the transfer station and the process station for moving flat media between them. The cassettes on indexer (201) move in rows, as recited in claim 6. Transfer device (260) is a transfer robot carrying flat media to a carrier (8), as recited in claims 15 and 16.

13. Claim 1, 4, 5, 15, 16, 18, 19, and 22 is rejected under 35 U.S.C. § 102(b) as being anticipated by Sakamoto et al. When considering claim 1, Sakamoto et al has an indexer (the lower row of conveyor unit 6) with a docking station (at the upper level of the elevator 8) above the indexer, a transfer station (at 4 and 7), and a process robot (41 or 46). The rollers on the conveyor support the edges of the pods, as recited in claims 4 and 5. The transfer station (41) at the transfer station to carries flat media to a carrier (index table 2), as recited in claims 15, 16 and 22. When considering claim 22, the upper and the lower rows of Sakamoto et al are the first and second parallel rows with a shuttle device (9) for moving pods from one row to another, with the docking station (7 and 8) having a first docking station elevator (8) associated with both rows, as to be associated with the first row, and a second docking elevator (7) associated with both rows, as to be associated with the second row, and a transfer station (4) with a transfer robot (41/48) carrying flat media to a carrier (46a) and a process robot (47) lifting and moving the carrier.


14. Claims 1, 2, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kang in view of Sato et al. Kang shows a transfer apparatus with the basic claimed combination of an indexer (200) at a first elevation for use with a docking station at a higher elevation (at the output 400). It varies from claim 1 by not specifying that the transfer apparatus is used with a process chamber having a process robot. However this is conventional. Figure 10 of Sato et al shows such a system with a transfer system (90) which indexes the pods at a first elevation, and delivers them to a processor at a docking station at a second higher elevation. The processor has a process robot (15) to move the wafers from a transfer station to the process station. It would have been obvious to one of ordinary skill in the art to use the transfer device of Kang to transfer pods to a processor that includes a process robot, as this is conventional in the art, as evidenced by Sato et al. Kang has a loader (300) associated with the indexer that includes an elevator (320) and a rotator (350) as recited in claims 2 and 10.

15. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwama in view of Bonora et al, U.S. 6,223,886. Iwama shows the basic claimed processing system, but varies from the claims by not having rollers to move the cassettes through the indexer. Bonora et al '886 shows a similar cassette conveyor with powered rollers to move the cassettes smoothly to avoid damaging, see column 2, lines 35-41. It would have been obvious to one of ordinary skill in the art to modify the indexer of Iwama by using powered rollers to move the cassettes through the indexer, to smoothly move the cassettes and avoid damaging the cassettes, as taught by Bonora et al '886.

16. Claim 17 is rejected under 35 U.S.C. § 103(a) as being unpatentable over by Sakashita in view of Thompson et al (any of the five cited by applicant). Sakashita shows a system for processing flat media with a process robot with an end effector with a pair of fingers (291). It varies from the claims by not specifying that the fingers engage slots on the carriers (8). Figures 3 and 4 of the Thompson et al references show a similar carrier with engaging slots (80). It would have been obvious to one of ordinary skill in the art to modify the carriers (8) of Sakashita by forming them with engaging slots, to positively engage the fingers of the end effector, as taught by Thompson et al.

17. Hughes et al, Takahashi et al, Harima, and Kaneko et al are cited as showing indexer structures.

18. An inquiry concerning this action should be directed to Examiner Thomas J. Brahan at telephone number (703) 308-2568 on Mondays through Fridays from 9:30-7:00 EST. The examiner's supervisor, Ms. Eileen Lillis, can be reached at (703) 308-3248. The fax number for Technology Center 3600 is (703) 305-7687.

  
THOMAS J. BRAHAN  
PRIMARY EXAMINER